

REMARKS/ARGUMENTS

The present Amendment is in response to the Final Office Action having a mailing date of Claims 1-22 are pending in the present Application. Applicant has amended claim 7. Consequently, claims 1-22 remain pending in the present application.

Applicant has amended claim 7 to correct a minor error. In particular, claim 7 recited a security "chip" (which did not have proper antecedent basis) in lieu of a security processor in two instances. Consequently, claim 7 has been amended to recite only a security processor. This amendment is seen by Applicant as cosmetic, and as such, is not subject to the prosecution history estoppel imposed by Festo. For the record, Applicant points out that the Supreme Court in Festo noted that a cosmetic amendment would not narrow the patent's scope and thus would not raise the estoppel bar. Accordingly, Applicant respectfully submits that no new matter is entered and no new search is required.

This application is under Final Rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the Amendment to clarify issues upon appeal.

In the above-identified Office Action, the Examiner rejected claims 5 and 13 under 35 U.S.C. § 112, second paragraph. In response to Applicant's arguments, the Examiner stated that "each of the hardware key, a platform key and a user key, as recited in the claim, is also, by nature, an encrypting key."

Applicant respectfully disagrees with the Examiner's rejection. Claim 5 recites:

5. The method of claim 4 wherein the four levels further comprise a hardware key pair level, a platform key pair level, an encrypting key pair level, and a user key pair level.

Claim 13 recites:

13. The system of claim 12 wherein the four level structure further comprise a hardware key pair level, a platform key pair level, an encrypting key pair level, and a user key pair level.

Thus, claims 5 and 13 currently recite four different key pair levels including “an encrypting key pair level . . .” It is well accepted that a patentee can be his own lexicographer. In the specification, an **encrypting** key pair is described as part of a four level hierarchy. Specification, paragraph 19. This is in contrast to the term **encryption** key. The term encryption key is used in a context which makes it clear that the term encryption key refers more generally to any of the key pairs in the four level hierarchy. Specification, paragraph 4. This is in contrast to the encrypting key pair, which is at a specific level in the key hierarchy. Consequently, when read in light of the specification, it is clear that the term **encrypting** key pair refers to a specific key pair in the next-to highest level in one four level **encryption** key hierarchy. Accordingly, Applicant respectfully submits that claims 5 and 13 are clear and definite.

In the above-identified Office Action, the Examiner rejected claims 1-22 under 35 U.S.C. § 102 as being anticipated by U.S. Patent 6,446,209 (Kern). In response to the Applicant’s arguments, the Examiner stated that “the alleged limitation has not been recited into the claim that there is a separate and additional embedded security processor, as presented in the argument; instead, the submitted claim limitation merely recites ‘utilization with an embedded security chip of the computer system’”. . . The Examiner went on to cite Kern, col. 11, lines 8-10 as teaching certain tag data indicating that a security (or non-binding) state..

Applicant respectfully disagrees with the Examiner’s rejection. Claim 1 recites:

1. A method for control of key pair usage in a computer system, the method comprising:
 - (a) creating key pair material for utilization with an embedded security chip of the computer system, the key pair material including tag data, the tag data

indicating whether the key pair material is bound to the embedded security chip without indicating an identity of the embedded security chip or the computer system; and

(b) determining whether the key pair material is bound to the embedded security chip based on the tag data.

Similarly, claim 7 recites:

7. A computer system with control over key pair usage, the computer system comprising:

- a main processor for controlling the computer system; and
- a security processor coupled to the main processor for embedded security in the computer system, the security processor for storing tag data with key pair material, the tag data indicating whether the key pair material is bound to the embedded security processor without indicating an identity of the embedded security processor or the computer system, the security processor also determining binding of the key pair material to the security processor based on the tag data.

Claim 16 recites:

16. A method for controlling usage of key pairs in a hierarchical structure of key pairs in an embedded security chip, the method comprising:
storing tag data with key pair data for each level of the hierarchical structure, the tag data indicating whether the key pair material is bound to the embedded security chip without indicating an identity of the embedded security chip or the computer system; and
determining whether the key pair data is bound to the embedded security chip based on the tag data.

Thus, independent claims 1, 7, and 16 all recite methods or systems for control of key pair usage in a computer system. Claim 7 specifically recites the use of a main processor and a “security processor coupled to the main processor.” Because the security processor is coupled with the main processor, the security processor must be a component that is separate from the main processor.

Claims 1 and 16 recite the use of an “embedded security chip.” Again, it is well accepted that a patentee can be his/her own lexicographer. In the above-identified application, the term embedded “security chip” is used consistently with the security processor cited by the Examiner. See, for example, Specification, paragraph 3-4 and FIG. 1; paragraph 18. Furthermore, this embedded

security chip/processor are depicted and shown as separate from the main processor. Consequently, the “embedded security chip” and “embedded security processor” are both embedded on the system board of the computer system and coupled to a separate, main processor. Specification, page 1, lines 15-20 and FIG. 1. Thus, the embedded security processor and security chip are effectively synonymous. Consequently, despite the Examiner’s conclusion to the contrary, claims 1, 7, and 16 all recite an embedded security chip, or security processor, separate from the main processor in conjunction with the recited tag data, using the recited tag data to determine binding, or the use of key pairs. This is particularly true when the claims are read in light of the specification..

Although Kern functions for its intended purpose, Kern fails to teach or suggest the methods and system recited in claims 1, 7, and 16. In particular, Kern fails to teach or suggest utilizing key pair material for use with an embedded security chip, or security processor, in conjunction with the recited tag data, using the recited tag data to determine binding, or the use of key pairs.

Kern describes a storage controller that selectively allows access to a corresponding storage device based on a key. Kern, Abstract, lines 1-5. The storage controller of Kern allows the storage device to be directly attached to a network without the use of an intermediate server to perform security functions. Kern, Abstract, lines 7-10 and col. 2, lines 36-42. Kern specifically describes the components of this controller as including an interface 120, a security module 122, and a storage map. Kern, FIG. 1A: col. 6, lines 47-51; and col. 6, line 66-col. 7, line 1. An example of the storage map, which includes an identification of the storage region, a reference key (of “1”, “2”, or “none”) and a security type, is in Table 1 of Kern. Despite a detailed discussion of the security controller, Applicant has found no mention in Kern of the security module 122 residing on the system board along with a separate processor. Instead, the security module of Kern apparently is the

only processor for the security controller. Thus, apparently all of the functions of the security controller, whether related to security or not, would be performed by the security module. For example, Kern describes the security controller as performing a variety of storage-related functions in addition to security. Kern, col. 5, lines 16-23. The security module of the security controller would apparently perform these functions. Thus, there is apparently no separate, dedicated embedded security processor/chip on a system board along with an additional processor. Consequently, Kern fails to teach or suggest the use of the recited embedded security processor/chip.

Kern also fails to teach or suggest the recited tag data. The Examiner cited Kern, col. 11, lines 8-10 as teaching the key pair material including the recited tag data. Applicant still respectfully disagrees with the Examiner. The cited portion of Kern merely describes one type of security that may be provided. In whole, this portion of Kern states:

In step **406**, the application program **110-112** chooses a desired level of security for the region to be allocated. In this example, the levels of security, also called "security types" or "access levels" include:

- 1) "read/write protect" where both Reads and Writes are prohibited. Here, the storage controller **106** prevents reading and writing to the associated storage regions unless the host presents an appropriate key.
- 2) "write protect" where Writes are prohibited but Reads permitted. Here, as discussed in greater detail below, the controller **106** will prevent hosts from writing the storage region unless the host presents an appropriate key. The associated storage region may be freely read.
- 3) "none" or "no security," where any host can read and write to this storage region without presenting a key. As an example, "none" may be used as a default value if another security type is not chosen.

Kern, col. 10, line 62-col. 11, line 11. Consequently, this portion of Kern merely notes different types of security levels to which the key may correspond. Even Table 1 of Kern merely mentions security keys, storage regions, and the type of security. The references in Table 1 of Kern to the reference security key merely restate the security type and correspond to the three types of security

or access levels. Thus, neither the cited portion of Kern nor Table 1 indicates that a key pair material includes tag data. Moreover, a search of Kern fails to turn up the term "tag" associated with the key of Kern. Because Kern fails to describe the recited tag data, Kern must also fail to determine binding based upon the tag data. Consequently, Kern fails to teach or suggest the recited tag data and determining binding based upon the tag data.

Kern also fails to describe the recited key pair material. As described in the specification, a key pair includes two keys for each level. Specification, page 2, lines 22-23. In contrast, Applicant can find no mention in Kern of using key pairs. Instead, a simple key, or password, is apparently used to access the data in the storage that is managed by Kern's storage controller. Kern, col. 6, lines 56-65. Consequently, Kern also fails to describe the recited key pair material. Accordingly, for at least the above-identified reasons, Applicant respectfully submits that claims 1, 7, and 16 are allowable over the cited references.

Claims 2-6 and 20 depend upon independent claim 1. Claims 8-15 and 21 depend upon independent claim 7. Consequently, the arguments herein with respect to claims 1 and 7 apply with full force to claims 2-6, 8-15 and 20-21. Claims 17-19 and 22 depend upon claim 16. Consequently, the arguments herein with respect to claim 16 apply with full force to claims 17-19 and 22. Accordingly, Applicant respectfully submits that claims 2-6, 8-15, and 17-22 are allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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Date

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